

### REMARKS

Claims 1-15, 27-32, 42 and 43 are pending, of which claims 1, 27 and 42 are independent. Favorable reconsideration and further examination are respectfully requested.

#### Claim objections and § 112 Rejections

In objecting to claim 9, the Examiner stated:

Claim 9 is objected to because of the following minor informalities:  
"a event context" should read "the event context".  
Appropriate correction is required.

Claim 9 has been amended. The Applicant believes that the amendment overcomes the Examiner's objection.

In rejecting the claims under § 112, the Examiner stated:

As to claim 1:

- The term "events" (line 6) renders the claim indefinite. It is not clear if it is referring to "receiving events" or "arriving events"
- The term "the events" (line 9) renders the claim indefinite. It is not clear if it is referring to "receiving events" or "arriving events".
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As to claim 2:

The term "execution context" renders the claim indefinite. It is not clear if it is referring to "the execution context" of claim 1.

As to claim 6:

The term "the system" lacks antecedent basis.

As to claim 8:

The term "the packet" lacks antecedent basis.

As to claim 9:

The term "the event" lacks antecedent basis.

As to claims 12 and 13:

The term "an event" renders the claims indefinite. It is not clear if it is referring to "the event" of claim 11.

As to claim 14:

The term "the queue" lacks antecedent basis.

As to claim 27:

The term "events" (lines 4 and 5) renders the claims indefinite. It is not

clear if it is referring to "events" recited at line 3.

As to claim 29:

The term "the packet" lacks antecedent basis.

As to claim 30:

The term "the event" lacks antecedent basis.

As to claim 31:

The term "the event queue" lacks antecedent basis.

As to claim 32:

The term "the event" lacks antecedent basis.

As to claim 42:

- The term "events" (line 7) renders the claim indefinite. It is not clear if it is referring to "events" recited at line 6.
  - The term "the context queues" lacks antecedent basis.
- Dependent claims are rejected for fully incorporating the deficiencies of their base claims.

Regarding claims 1, 27, and 42, the terms "events" in lines 6 and 9 make clear that they refer to "events from the global event queue" and "events for the event content," respectively. Accordingly, the Applicant believes that these claims are clear and proper as written.

Claims 1-2, 6, 8, 9, 12-13, 14, 27, 29-32, and 42-43 have been amended. The Applicant believes that these amendment overcomes the Examiner's § 112 rejections.

### § 103 Rejections

The Examiner rejected independent claims 1, 27, and 42 under U.S.C. 103(a) as being unpatentable over Blumrich et. al. (U.S. Application No. 20040103218) in view of Wipfel et. al. (U.S. Application No. 6,151,688). The Examiner stated:

Blumrich teaches a method, a computer program product, and an apparatus comprising:  
dynamically binding an event context to an execution context in response to receiving events by: storing arriving events into an event queue that is accessible by event contexts; and associating an event queue with the execution context to temporarily store the events for the event context for a duration of the dynamic binding (see ¶¶ 0100 and 0110-0128).  
Blumrich, however, does not specifically teach the use of the global event queue as claimed.

Wipfel teaches the use of the global event queue (see col. 15, line 3-col. 16, line 17).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Blumrich with Wipfel because it would have provided the capability for optimizing massively parallel computing at teraOPS-scale at decreased cost, power and footprint.

The Applicant respectfully disagrees. Claim 1 is directed to a method for dynamically binding an event context to an execution context in response to receiving events. Specifically, claim 1 requires storing arriving events into a global event queue ... ; storing events from the global event queue in per-execution context event queues; and "associating an event queue with the execution context to temporarily store events for the event context for a duration of the dynamic binding."

In connection with figure 2, reproduced below, Applicant's specification provides an illustration of these features as follows:

Referring to FIG. 2, one approach to use any available execution contexts to process unrelated events includes dynamically binding an event context to an execution context in response to receiving an event. Events arrive into the system via a global event queue 32 and are stored in per-execution context event queues 34. In the example discussed events are packets. A FIFO event queue 36 is associated with the execution context to temporarily store the events (packets) for that event context (for the duration of the binding). The events (packets) that are received by the network processor are dynamically bound on a per-event basis in the context queues 36.<sup>1</sup>

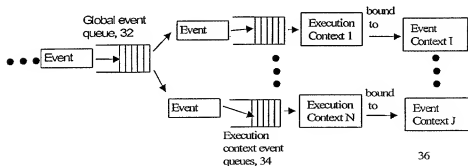


FIG. 2

<sup>1</sup> Page 5, lines 4-15, of Applicant's specification.

The Examiner appears to regard these features of Applicant's claim as being taught by paragraph [0100] and paragraphs [0110]-[0128] of Blumrich. The Applicant disagrees and believes Blumrich does not describe or suggest any of these features or other features of claim 1.

The cited portions of Blumrich merely describe basic architecture of a single torus router (item 70 in figure 7 of Blumrich). Specifically, the cited portions detail features of a) the router input<sup>2</sup>, b) the router output<sup>3</sup>, c) the router's "local injection" queues<sup>4</sup>, d) the router's "local reception" queues<sup>5</sup>, and 5) a routing algorithm<sup>6</sup> for the router.

The functions of the router's input are described as accepting incoming packets, verifying their integrity, buffering them if necessary, and ultimately forwarding them to other locations.<sup>7</sup> The functions of the router's output are described as scheduling packets at the output to obtain high throughput, and retaining copies of all packets for reliability.<sup>8</sup> The function of the "local injection" queues is described as allowing a processor to inject packets into a network for transmission.<sup>9</sup> The function of "local reception" queues is described as buffering packets terminating in the router.<sup>10</sup> The function of the routing algorithm is described as routing individual packets adaptively by "[embedding] two virtual networks onto a physical network: an adaptive network and a deterministic network."<sup>11</sup>

There is nothing in any of these sections that describe or would have made obvious the features of Applicant's claim 1 of storing arriving events into a global event queue ... ; storing events from the global event queue in per-execution context event queues; and "associating an event queue with the execution context to temporarily store events for the event context for a duration of the dynamic binding."

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<sup>2</sup> Paragraphs [0102]-[0112] of Blumrich.

<sup>3</sup> Paragraphs [0113]-[0117] of Blumrich.

<sup>4</sup> Paragraphs [0118]-[0119] of Blumrich

<sup>5</sup> Paragraphs [0120]-[0121] of Blumrich

<sup>6</sup> Paragraphs [0122]-[0128] of Blumrich

<sup>7</sup> Paragraph [0103] of Blumrich.

<sup>8</sup> Paragraph [0114] of Blumrich.

<sup>9</sup> Paragraph [0019] of Blumrich.

<sup>10</sup> Paragraph [0121] of Blumrich.

<sup>11</sup> Paragraph [0123] of Blumrich.

Since the Examiner relies on nearly four columns of text, the Applicant respectfully requests the examiner that, if this ground of rejection is repeated, to quote verbatim language in the references corresponding to each limitation in claim 1 that the Examiner regards as suggesting the limitation.

In view of the foregoing, the Applicant believes that claim 1 is patentable over the prior art. For at least a similar reason given for claim 1, claims 27 and 42 are patentable over the prior art.

All of the dependent claims are patentable for at least the reasons for which the claims on which they depend are patentable.

Canceled claims, if any, have been canceled without prejudice or disclaimer.

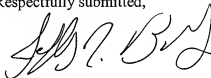
Any circumstance in which the applicant has (a) addressed certain comments of the examiner does not mean that the applicant concedes other comments of the examiner, (b) made arguments for the patentability of some claims does not mean that there are not other good reasons for patentability of those claims and other claims, or (c) amended or canceled a claim does not mean that the applicant concedes any of the examiner's positions with respect to that claim or other claims.

Please apply any charges or credits to deposit account 06-1050.

Date: \_\_\_\_\_

*21 November 2008*

Respectfully submitted,



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